

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARK H. FALAHEE

Appeal No. 2007-4106
Application No. 10/427,445
Technology Center 3700

Decided: January 29, 2008

Before WILLIAM F. PATE, III, TERRY J. OWENS and ANTON W. FETTING,
Administrative Patent Judges.

OWENS, *Administrative Patent Judge.*

DECISION ON APPEAL

The Appellant appeals from a rejection of claims 1 and 3-12, which are all of the pending claims.

THE INVENTION

The Appellant claims a method and instrument for fixation of a facet joint.

Claim 1 is illustrative:

1. A minimally invasive method of fixing a facet joint, comprising the steps of:
 - targeting a point by positioning a radio-opaque marker behind a superior articular process of a facet joint;
 - providing a fixture including a guide defining a first axis;
 - orienting the guide so that the axis intersects the targeted point through an inferior articular process of a facet joint; and
 - fastening the facet joint with a fastener that penetrates through the inferior process and at least a portion of the superior process along the axis.

THE REFERENCES

Banko	US 4,719,907	Jan. 19, 1988
Schneiderman	US 6,547,795 B2	Apr. 15, 2003
Tromanhauser	US 6,669,698 B1	Dec. 30, 2003 (filed Oct. 24, 2000)

THE REJECTIONS

The claims stand rejected as obvious under 35 U.S.C. § 103 as follows: claims 1 and 3-7 over Schneiderman in view of Banko; claims 8 and 12 over Tromanhauser in view of Banko; and claims 9-11 over Tromanhauser.^{1,2}

OPINION

We reverse the Examiner's rejections. We need to address only the independent claims, i.e., claims 1, 5 and 8.

Claims 1 and 5

Schneiderman discloses "a cannulated bone screw system for transfacet and translaminar stabilization of the spine" (col. 1, ll. 17-19). The system comprises a guide instrument (100) "used to determine and ensure the proper screw trajectory

¹ Because claim 8 is rejected over the combination of Tromanhauser and Banko and claims 9-11 depend from claim 8, Banko should be included in the rejection of claims 9-11.

and to help determine the length of a bone screw to be used” (col. 3, l. 65 – col. 4, l. 1). Guide instrument 100 has a distal prong (106) that contacts the transverse process (12), a middle prong (108) that contacts the spinous process (16), and a proximal prong (110) having at its end a block (116) for use in inserting a guidewire (160) through spinous process 16 and transverse process 12 (col. 4, ll. 1-21; col. 7, ll. 54-59; col. 8, ll. 18-22; fig. 3). Guidewire 160 has on its distal end a trocar tip (166) that is used to self-drill guidewire 160 through spinous process 16 and transverse process 12 (col. 5, ll. 35-41; fig. 10). The placement of prongs 106, 108 and 110 defines the trajectory of guidewire 160 (col. 7, ll. 28-31). After guidewire 160 is installed it is used to guide a drill bit (210) that is placed over it and used to drill a hole through spinous process 16 and transverse process 12, and then guidewire 160 is used to guide a screwdriver 270 that is slid over it and used to insert a screw (230 or 240) through the hole (col. 6, ll. 5-6, 27-29; col. 7, ll. 29-31; col. 8, l. 57 – col. 9, l. 1; figs. 6, 18A).

Banko discloses “an orthopedic pin placement guide [2] for precision guiding bone screws or pins [34] into fractured bone to promote healing” (col. 1, ll. 6-9). To facilitate removal of guide 2 following screw or pin implantation, guide 2 has frangible portions (14, 16) that cause it to break into four quadrants without disturbing the screws or pins that have been guided therethrough (col. 4, ll. 8-19). “The pin placement device may optionally comprise radioopaque markers, shown as **101** pictorially shown in FIG. 1, in each of the aforementioned said quadrants to facilitate identification and location of such quadrants by radiograph techniques such as X-rays” (col. 4, ll. 45-50).

² Rejections under 35 U.S.C. § 103 of claims 8 and 12 over Schneiderman in view of Banko and claims 9-11 over Schneiderman are withdrawn in the Examiner’s Answer (Ans. 2-3).

The Appellant's claim 1 requires targeting a point by positioning a radio-opaque marker (32) behind a superior articular process (100), and orienting a guide (204) so that a first axis intersects the targeted point through an inferior articular process (101).

The Examiner argues that Schneiderman's trocar tip 166 is a marker in that it marks or locates a target point (Ans. 7-8). Even if that is so, the Appellant's claim 1 requires that the marker is positioned behind a superior articular process, whereas Schneiderman's trocar tip 166 is positioned on the spinous process 16 side of the facet joint (figs. 3, 6). As indicated by a comparison of Schneiderman's figure 3 and the Appellant's figure 1, Schneiderman's spinous process 16 corresponds to the Appellant's inferior articular process 101, not superior articular process 100.

The Examiner argues that the use of a radio-opaque marker as disclosed by Banko would facilitate identification and proper location of a target point behind a superior articular process of the facet joint (Ans. 7). The Examiner, however, has not established that Banko's disclosure of radio-opaque markers that mark the quadrants of a orthopedic pin placement guide would have led one of ordinary skill in the art to position a radio-opaque marker behind a superior articular process. The Examiner argues that radio-opaque markers were well known (Ans. 7). Even if that is correct, the Examiner has not provided evidence which indicates that one of ordinary skill in the art would have been led to position a radio-opaque marker behind a superior articular process in Schneiderman's technique. Hence, the record indicates that the Examiner used impermissible hindsight in rejecting the Appellant's claim 1. *See W.L. Gore & Associates v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

The Appellant's claim 5 requires positioning a radio-opaque marker at a point behind a facet joint, and orienting a guide so that a first axis defined by the guide intersects the point through a vertebra. Schneiderman's trocar tip 166, relied upon by the Examiner as a marker (Ans. 7-8), is on the axis defined by guide 116 (figs. 3, 6). Hence, the axis defined by guide 116 does not intersect through a vertebra a point at which the marker is positioned behind a facet joint. The above discussion with respect to claim 1 of the deficiency in the Examiner's argument regarding the combination of Schneiderman and Banko also applies to claim 5.

Claim 8

Tromanhauser discloses a guide (100) for placing a screw through vertebral bones (col. 1, ll. 7-9, 45-49). Guide 100 comprises a guide (116) that is placed against a vertebra corresponding to the Appellant's superior articular process 100, and a guide (20) that is placed against a vertebra corresponding to the Appellant's inferior articular process 101 and which has a cylindrical end through which a guide tube (1300) is inserted for guiding, sequentially, a trocar (1500) with pointed end 1502, an awl (1600) and a drill bit (1700) (col. 5, ll. 54-62; col. 6, ll. 2-6, 30-48; fig. 28). Guide tube 1300 is guided by a guide assembly (2506) (col. 6, ll. 35-38).

The Appellant's claim 8 requires a second guide coupled to one end of a member for guiding, along a second axis at a second angle relative to the member, the insertion of an elongated arm terminating in a radio-opaque marker for targeting a point associated with a joint based upon the position of the radio-opaque marker, and a first guide coupled to the other end of the member for targeting the radio-opaque marker and driving a fastener along a first axis at a first angle relative to the member for fusing the joint.

The Examiner argues that pointed end 1502 of Tromanhauser's trocar 1500 is a marker and that it would have been obvious to one of ordinary skill in the art to incorporate Banko's radio-opaque marker in Tromanhauser's device "to facilitate identification and proper location of a target point behind the superior articular process of the facet joint" (Ans. 5-6). Tromanhauser's trocar tip 1502 is in the same position, with respect to the facet joint, as Schneiderman's trocar tip 166 (compare Tromanhauser's fig. 26 and Schneiderman's fig. 6). Hence, our discussion of the deficiency in the Examiner's argument regarding Schneiderman's trocar tip 166 also applies to the rejection over Tromanhauser in view of Banko, as does our discussion of the deficiency in the Examiner's argument with respect to the combination of Schneiderman with Banko.

DECISION

The rejections under 35 U.S.C. § 103 of claims 1 and 3-7 over Schneiderman in view of Banko, claims 8 and 12 over Tromanhauser in view of Banko, and claims 9-11 over Tromanhauser are reversed.

REVERSED

JRG

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